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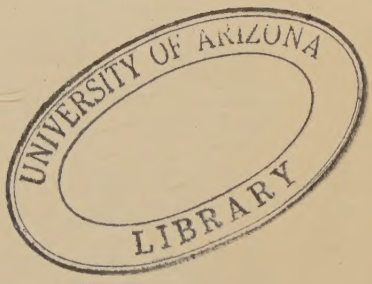
Oregon Agricultural College

Experiment Station

Cutworm Control in Oregon

By

B. G. Thompson



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Cutworm Control in Oregon

By
B. G. Thompson

More or less damage is done each year to truck and field crops in Oregon by cutworms. Some years the outbreak becomes serious and much damage is done. During these periods truck and garden crops suffer most, but a good deal of damage is also done to the foliage and fruits of trees, to shrubs, ornamentals, and field crops. Serious outbreaks of cutworms occurred in Oregon during the seasons of 1900, 1914, and 1925. Losses due to the variegated cutworm in 1900 in Oregon, Washington, and British Columbia are estimated at no less than $2,500,000.

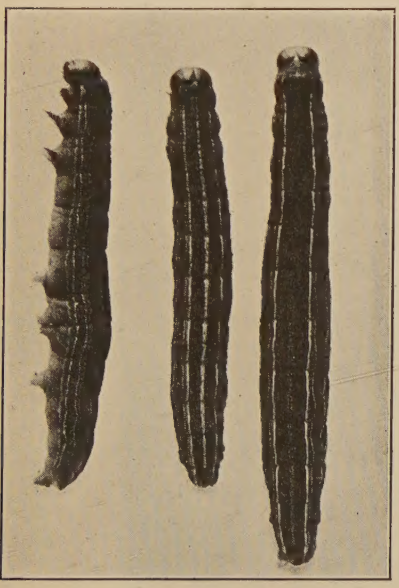

Fig. 1. Olive green cutworm, larvae. Enlarged.

There are more than fifty species of cutworms in Oregon. The most important are the variegated cutworm, *Lycophotia margaritosa* (Hubn.); the olive green cutworm, *Neuria procincta* (Grote.); and the greasy cutworm, *Agrotis ypsilon* (Rott.). The true army worm does not occur in Oregon, but the variegated cutworm when unusually abundant assumes army habits, moving about in large armies in search of food.

SEASONAL HISTORY AND HABITS

The life-history varies with the species. In Oregon the general life-history of the economic forms is about as follows: The winter is spent as half grown larvae in the soil. The larvae become active early in the spring, reach maturity during April and May and enter the soil, forming earthen cells in which the larvae change to pupae. From these pupae the parent or adult moths emerge during April, May, and June. These adults are the common "millers" which are seen at light during summer evenings. The species differ somewhat in color but in general are of a dull grayish or brownish color (see Fig. 4). The moths mate and soon after begin to deposit eggs. Each female lays from 200 to 500 or more eggs, either singly or in masses. The eggs are usually deposited in fields on or near the food plants of the larvae, but may be deposited on buildings, trees,

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fences, etc. One species, the variegated cutworm, seems to have a preference for milady's wash hanging on the line to dry. The eggs hatch in a few days into another generation of worms. This generation of

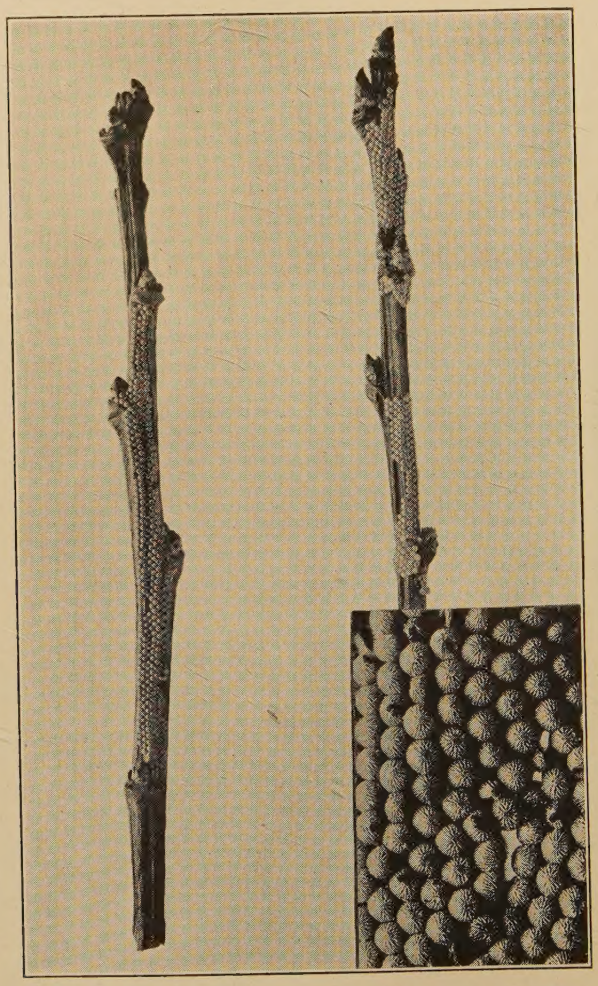

Fig. 2. Variegated cutworm, eggs. Insert, eggs enlarged.

worms reaches maturity during July and August, the adults of the second generation being present in the field from July until October. The eggs from these adults hatch into the overwintering larvae, thus completing two generations a year.

The cutworms normally feed at night, cutting off the younger plants near the surface of the soil and climbing up and feeding on the

foliage of the older plants. Heads of lettuce and cabbage are tunneled into and even the fruit of the tomato is attacked; in fact, cutworms are very general feeders, attacking almost any garden, truck, or field crop.

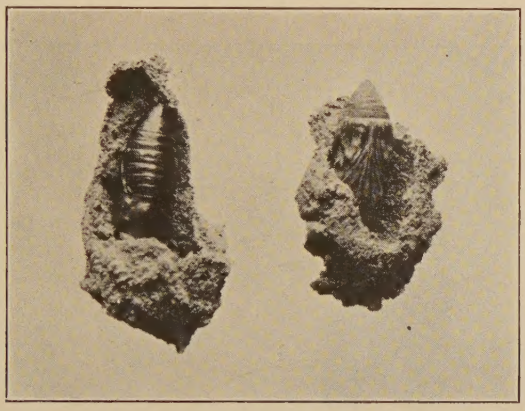

Fig. 3. Pupae in earthen cells. Cells broken open to expose pupae.

In seasons of severe infestation trees and shrubs are climbed and defoliated. The day is spent beneath debris or in the soil just beneath the surface. Because of their resemblance in color to the soil they are often overlooked until the damage becomes quite apparent. Prompt action at this time is necessary; a few days may mean the difference between a slight damage and total loss of the crop.

CONTROL

Poison bran mash is the standard remedy for cutworms, and when properly prepared and applied gives excellent control. The Oregon Experiment Station has found the following baits to be equally effective:

No. 1.	Coarse wheat bran	25 lbs.
	Salt	½ lb.
	White arsenic or paris green	1 lb.
	Sirup or brown sugar	1 pt.
	Water to make a crumbly mash.	

The dry ingredients are first thoroughly mixed and the water and sirup added. If too much water is used the mash will be sloppy and hard to scatter. The material should be just wet enough so that it will fall apart readily after being pressed together in the hands. A half barrel, a large tub, or a water-tight box makes a good receptacle in which to mix small quantities of bait.

No. 2.	Coarse wheat bran	16 lbs.
	Sodium fluoride	1 lb.
	Molasses	2 qts.
	Water about 2 gallons.	

Dissolve the sodium fluoride in the water, stir in the molasses and add to the bran. Mix thoroughly. This is the poison bait commonly

used for earwigs. It can be purchased already mixed, with the exception of the water, from most dealers in insecticides.

The poison bait should be broadcast over the infested area at the rate of 12 to 15 pounds per acre as soon as the first cutworm injury is

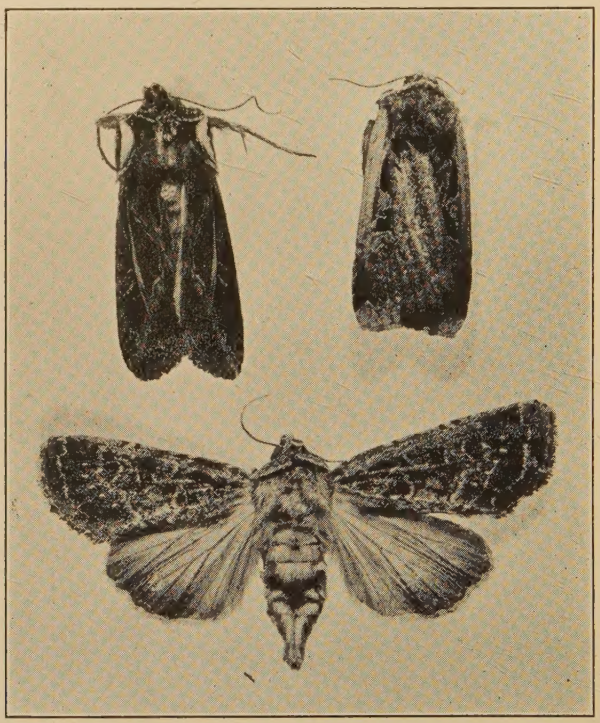

Fig. 4. Adult moths. Enlarged.

noticed. Chickens and other livestock should not be allowed in a treated field.

As the cutworms are usually present and active in the soil at the time the early gardens are planted, it is often advisable, as a matter of insurance, to broadcast the poison bait over the ground just before it is planted. Since little food is available at this time the worms will be hungry and take the poison readily, thus being killed before the crop is present for them to damage. A small amount of the poison mash placed about newly set plants will usually prove an efficient protection.